REMARKS

Claims 1-40 are pending in the application. Claims 1-40 were rejected. Claims 10, 20, 23, 26, 29, 32, 33, 36, 39, and 40 are being amended. No new matter is being introduced.

Claims 23, 29, and 36 were rejected under 35 U.S.C. 112, second paragraph. These claims are being amended to change "about the rate" to -- at least the rate --. Applicant believes that these claims should now be allowable under 35 U.S.C. 112, second paragraph and requests the rejections under same be withdrawn.

Claims 10-18 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement because, as stated in Part 4 of the Office Action, "[c]laim 10 discloses 'automatically pre-gathering the statistical data' but does not disclose what does the pre-gathering." For purposes of prior art rejections, claim 10 was interpreted to read "automatically pre-gathering the statistical data in an information buffer in a controlled manner, by an element of the multi-processor system."

Applicant believes that the specification as originally filed includes support for claim 10 under 35 U.S.C. 112, first paragraph. In the specification as originally filed, at page 8, line 20, Applicant discloses the line card pre-gathers the statistical data and stores the statistical data in a self-identifying message in a message buffer. At page 11, line 9, Applicant discloses that the statistical information about the ports is automatically gathered by the processor 335 in the line cards 330 (Fig. 3). At page 12, line 20 in reference to Fig. 8, Applicant discloses that, if it is time to gather the statistical data from the port and the data is not in the queue, then, in step 820, the respective high-bandwidth port is accessed to gather the statistical data. On page 14, lines 24-25, Applicant discloses that the respective processes may be implemented in software in the central processor and line cards. Thus, the line cards may include a processor that executes software to pre-gather statistical information about ports in the line card for reporting to the central processor. Applicant further points out that on page 4 of the Office Action at hand, Examiner takes official notice that computer programs are well-known in the art and further states that pre-gathering information and storing the information is among functions capable of being executed by computer programs. Thus, Applicant believes that the specification as originally filed meets the requirements of 35 U.S.C. 112, first paragraph. However, to more particularly point out and

distinctly claim the invention, Applicant is amending claim 10 to include the language suggested by the Examiner on page 3 of the Office Action at hand ("automatically pre-gathering the statistical data in an information buffer in a controlled manner by the at least one element in the multi-processor system"). Accordingly, Applicant believes that claims 10-18 should be allowable under 35 U.S.C. 112, first and second paragraphs.

Claims 1-40 were rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's disclosed prior art in view of Allen *et al.* (USPN 5,495,522) in further view of Naimpally *et al.* (USPN 5,650,825) ("Naimpally").

Allen *et al.* is cited as a reference including an example of a system that pre-gathers statistical data (see column 76, lines 17-37). Allen *et al.*, however, in combination with Applicant's disclosed prior art, do not disclose "reporting a subset of the statistical data . . . when polled a) for the statistical data or b) for some other reason" as recited in Applicant's claim 1 as originally filed.

Applicant's claim 1 also includes a limitation directed to a "half-duplex communication bus." A half-duplex communication bus may be found in a network management station that uses a Simple Network Management Protocol (SNMP) to gather statistical data and other information from a Digital Subscriber Line Asynchronous Multiplexer (DSLAM), which includes high-speed ports for high data rate communications. The DSLAM high-speed ports transmit data, such as High Definition Television (HDTV) video data, for transmission from a video broadcasting source, through central offices where a network management station employing DSLAMs reside, to an end user who may be watching an HDTV broadcast on cable television, for example.

In SNMP, statistical data of each high-speed port of the DSLAM is required to be gathered at about a 1 Hz update rate. To account for the 1 Hz update rate, controllers in each of the DSLAMs must gather the statistical data of each port at 1 Hz and transmit that gathered statistical data to the network management station upon demand. Thus, it is not the high-speed video transfer or high-speed ports supporting same that is relevant here; what is relevant is the "half-duplex communication bus" using "out-of-band" communications to monitor, control, and gather statistical data about high-speed ports servicing, for example, high-speed video transfer.

In contrast, Naimpally is generally applicable to "in-band", variable bit rate video or constant bit rate video (see Naimpally, column 4, lines 40-46). Naimpally discloses techniques for multiplexing high-speed streams of video data (e.g., high definition television (HDTV)) with a lower-speed stream of video data, such as program reviews, program synopsis, etc. about programs to be transmitted at a later time. See column 6, lines 2-3. The programming data is referred to by Naimpally as "privatestuff" data.

In variable bit rate video streams, "stuffing" bytes are used to fill a data stream, thereby maintaining constant bit rate video (See Col. 2, lines 57-61). Naimpally replaces the stuffing bytes with privatestuff data by using a multiplexing technique. In this way, the new video stream with privatestuff data includes the same number of bits and maintains a constant bit rate so a television viewer does not experience drop-outs or flashes. Therefore, Naimpally teaches away from "reducing the number of communications and data transfer cycles" as recited in Applicant's claim 1. Accordingly, Applicant respectfully submits that it is inappropriate to combine Naimpally with Applicant's disclosed prior art and Allen *et al.* Thus, Applicant respectfully submits that a *prima facie* case of obviousness has not been established, and the rejection under 35 U.S.C. 103(a) should be withdrawn.

Moreover, to perform the multiplexing, a system employing the techniques disclosed by Naimpally (i) demultiplexes a data packet, (ii) examines the content of the data packet to determine whether "stuffing" bytes are being used in the data packet, (iii) determines whether the stuffing bytes are eligible for removal, (iv) replaces the stuffing bytes with the programming data, and (v) remultiplexes the data packet for continued transmission in the video stream. Thus, Naimpally discloses techniques applicable to a uni-directional bus broadcasting video data with additional programming data. In the case of transmission from a video source, through a DSLAM, to a television viewer, the video data with privatestuff data (i.e., additional programming data) propogates via the high-speed ports. Thus, the video data never interacts with the half-duplex communication bus.

To rely on a reference under 35 U.S.C. 103, it must be analogous prior art. MPEP 2141.01(a). "In order to rely on a reference as a basis for rejection of an Applicant's invention, the reference must either be in the field of Applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the invention was concerned. *In re* Oetiker, 977

F2d 1443, 1446, 24 USPQ 2d 1443, 1445 (Fed. Cir. 1992) cited in MPEP 2141.01(a). See also *In re* Clay, 966 F2d 656, 659, 23 USPQ 2d 1058, 1060-61 (Fed. Cir. 1992) ("a reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problems.")

In the instant application as recited in Claim 1, the field of endeavor is with respect to a half-duplex communication bus and not a high-data rate video bus that carries the high-speed video data (e.g., HDTV) disclosed by Naimpally. Protocols operating on the half-duplex communication bus (e.g., SNMP) do not support streams of data such as video data, and, therefore, the complexity of the Naimpally disclosure (i.e., the process steps (i) - (v) cited above) makes Naimpally inapplicable to half-duplex communication bus systems.

Moreover, Naimpally addresses a fundamentally different problem, which is to avoid interruption in a video stream of data by maintaining a constant bit rate. Applicant addresses a "best effort" problem, which is "reducing the number of communications and data transfer cycles," as recited in claim 1.

Accordingly, Applicant respectfully submits that, since the Naimpally reference discloses high-speed, in-band, video transfer techniques, it is not an analogous art to half-duplex communication bus arts. Accordingly, Applicant respectfully submits that the Naimpally reference is improperly combined with Applicant's disclosed prior art and Allen *et al.*

Therefore, for this second reason, Applicant also respectfully submits that the rejection under 35 U.S.C. 103(a) is improper and should be withdrawn.

Independent claims 26, 32, 33, 39, and 40 are being amended to include the "half-duplex communication bus" limitation. Therefore, because independent claims 10, 19, 20, 26, 32, 33, 39, and 40 include similar claim limitations ("reducing the number of communications and data transfer cycles" and "half-duplex communication bus"), these claims should be allowed for the same reasons described above in reference to claim 1.

Because claims 2-9, 11-18, 21-25, 27-31, 34-38 depend from the independent claims, these claims should be allowed for at least the same reasons.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims (Claims 1-40) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By_____
Mark B. Solomon
Registration No. 44,348
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133
Dated: